

anodizing the semi-conductor substrate to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate to provide a second porous layer adjacent the first porous layer opposite the surface, said second porous layer having a second porosity greater than said first porosity; and

separating an upper portion of the semi-conductor substrate from the semi-conductor substrate along a line of relative weakness defined in or adjacent said second porous layer.

144. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate at a first current density to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent the first porous layer opposite the surface, the second porous layer having a second porosity greater than the first porosity;

anodizing the semi-conductor substrate at a third current density different from said second current density to provide a third porous layer adjacent the second porous layer, the third porous layer having a third porosity different from said second porosity; and

separating an tipper [sic: upper] portion of the semi-conductor substrate along a line of relative weakness defined at the layer of the first through third porous layers having the

highest porosity.

145. (New) A method as defined in claim 144, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first and second current density, respectively, and wherein the electrolytic solution comprises hydrogen fluoride and an alcohol.

146. (New) A method as defined in claim 144, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first and second current density, respectively, and wherein in the anodizing steps, the composition of the electrolytic solution used in each anodizing step is the same.

147. (New) A method as defined in claim 144, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first and second current density, respectively, and wherein in the anodizing steps, the composition of the electrolytic solution used in the anodizing steps varies.

148. (New) A method as defined in claim 144, further comprising the step of annealing the semi-conductor substrate in a hydrogen atmosphere after the anodizing steps and before the separating step.

149. (New) A method as defined in claim 148, further comprising the step of

oxidizing the anodized substrate after the anodizing steps and before the hydrogen annealing step.

150. (New) A method as defined in claim 144, wherein the semi-conductor substrate is a single crystal silicon substrate.

151. (New) A method as defined in claim 144, wherein the semi-conductor substrate is an impurity-doped semi-conductor substrate.

152. (New) A method as defined in claim 144, further comprising the step of attaching a support substrate to the semi-conductor substrate before the separating step.

153. (New) A method as defined in claim 152, wherein the support substrate is attached to the semi-conductor substrate by bonding.

154. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate at a first current density to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent the first porous layer opposite

the surface, the second porous layer having a second porosity greater than the first porosity;

anodizing the semi-conductor substrate at a third current density different from said second current density to provide a third porous layer adjacent the second porous layer, the third porous layer having a third porosity different from said second porosity; and

separating an upper portion of the semi-conductor substrate from the semi-conductor substrate along a fine [sic: line] of relative weakness defined at the layer of the first through third porous layers having the highest porosity,

wherein in said anodizing step, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current, and wherein in the anodizing steps, the electrolytic solution is the same.

155. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate at a first current density to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent the first porous layer opposite the surface, the second porous layer having a second porosity greater than the first porosity;

anodizing the semi-conductor substrate at a third current density different from said second current density to provide a third porous layer adjacent the second porous layer, the third porous layer having a third porosity different from said second porosity; and

separating an upper portion of the semi-conductor substrate from the semi-conductor substrate along a fine [sic: line] of relative weakness defined at the layer of the first through third porous layers having the highest porosity,

wherein in said anodizing step, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current, and wherein the electrolytic solution used in the anodizing step varies.

156. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing said semi-conductor substrate at a first current density to provide a first porous layer adjacent said surface having a first porosity;

anodizing said semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent said first porous layer opposite said surface, said second porous layer having a second porosity greater than said first porosity;

annealing said semi-conductor substrate in a hydrogen atmosphere after said step of anodizing said semi-conductor substrate to provide said second porous layer.

157. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

forming a first porous layer adjacent said surface having a first porosity;

forming a second porous layer within said first porous layer having a second porosity higher than said first porosity; and

separating an upper portion of said semi-conductor substrate from said semi-conductor substrate along a line of relative weakness defined in or adjacent said second porous layer.

158. (New) A method for making a thin film semi-conductor comprising the steps of:

forming a first porous layer having a first porosity on a surface of a substrate;

forming a second porous layer within or underneath said first porous layer having a second porosity higher than said first porosity; and

separating an upper portion of said semi-conductor substrate from said substrate along a line of relative weakness defined in or adjacent said second porous layer,

wherein said first porous layer and said second porous layer are formed by anodizing.

159. (New) A thin film semi-conductor formed according to a method comprising the steps of:

providing a semi-conductor substrate having a surface;

forming a first porous layer having a first porosity on a surface of said substrate;

forming a second porous layer within or underneath said first porous layer having a second porosity higher than said first porosity; and